

# Flashcards and Coloring Book: Teaching Strategies and Minority Language Revitalization

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## Abstract

During the past thirty years, many minority language communities in Indonesia have been in the process of shifting. The rapid shift in language has reflected the complex generation gap between the older and younger generations. This study outlines the use of flashcards and coloring books as instructional tools to promote local language revitalization efforts. As an example of this pedagogical technique, we will look at a case study in a preschool program in Sintang, West Kalimantan (Indonesia). How can a pre-school program address this problem? We focus on flashcard and coloring book strategies because in pre-school, pictures usually draw more attention than texts. The play group discussed here included 13 children (4 - 5 years old) and the instructor. The results of this teaching experiment indicate that flashcard teaching is an effective method for language revitalization. This method encourages active learning at the pre-school level, motivates innovative language teaching, and strengthens the children's recall of vocabulary terms. This technique is simple but is in alignment with the behaviorist and cognitivist approaches to language learning. The study expands on the novel idea of using flashcards to teach local languages in pre-school. The children's enthusiastic response attests to the value of this pedagogy.

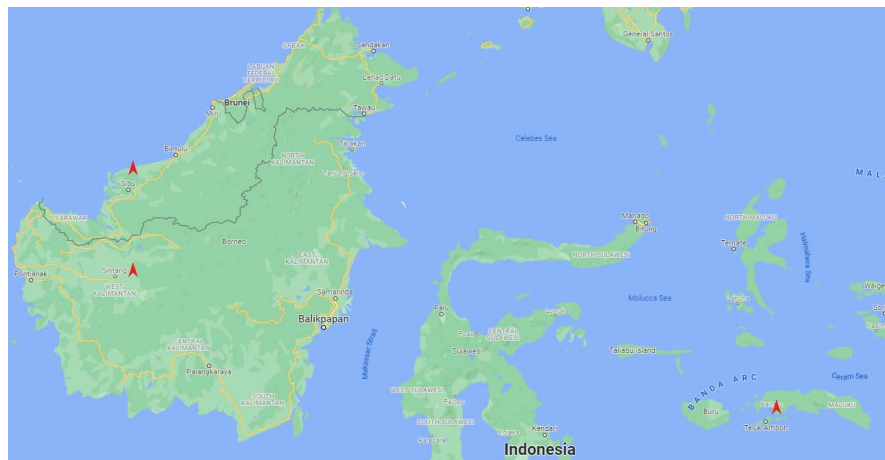
## Keywords

Minority Language Shift, Language Documentation, Flashcards and Colouring Book, Pre-School PAUD, Revitalization

## 1. Introduction

Southeast Asian countries have undergone substantial cultural and social trans-

formations over the past few decades. These transformations have had a profound impact on the sustainability of the region's diverse communities. In both Malaysia and Indonesia, many communities are transitioning from their ancestral languages to local dialects of the national languages, Malay and Indonesian, respectively. In several villages, only the older generation is fluent in the local (ancestral) language. The middle-aged generation may possess some knowledge of the language, but they neither use it nor pass it down to the younger generation. This swift language shift reflects the intricate intergenerational divide in terms of the inheritance of minority languages. The Desa community in Sintang, West Kalimantan (Indonesia) serves as an evident example (see **Figure 1**). In general, the Ibanic variant, Desa, is grappling with this cross-generational challenge of preserving and transmitting their language. Their language is rapidly becoming obsolete and is at risk of extinction, as indicated by **Herpanus (2013)**.



**Figure 1.** The Toyota Foundation language revitalization sites.

Indeed, in contemporary times, various minority ethnic groups face significant challenges in preserving their intangible heritage and the consequences of societal changes. Alongside the decline and extinction of languages, their cultural heritage is also under threat. In the community studied in this article, the Desa speakers experience a gradual dominance of the prevailing language, *Bahasa Indonesia*, over their own language. In addition to language, their cultural practices are also experiencing a disruption in their intergenerational transmission. An example of this phenomenon can be observed in the traditional weaving of *Tenun Ikat*, where rituals that were once essential to the weaving process are now rarely practiced (**Nurani & Setyawan, 2023**). A study conducted by **Suminto (2017)** further revealed that the younger generation of Desa (as well as other Dayak tribes, including the Iban, Kayan, and Sungkung) has forsaken various traditional cultural practices, such as elongating their earlobes, getting tattoos, donning iron bracelets, crafting beads, etc. In fact, as a result of the modernization and development of their inhabited region, a continuous process of social transformation has taken place. An illustrative example of this is the deforestation and extensive cultivation

of palm oil plants, which inevitably has led to an enhancement of the socio-economic conditions for the local population. However, it has also had a significant impact on the traditional knowledge and wisdom of the local population (Crosby, 2007), resulting in a decline in ecological knowledge among the younger generation. The Desa community is currently experiencing a transformation in terms of their local wisdom, which is closely associated with the changes occurring in their ecological environment (Herpanus, 2013).

## 2. Documentation and Revitalization: Two Distinct Principles

In the past two decades, the study of endangered languages has emerged as a distinct subfield within the field of linguistics, with its own set of contemporary priorities and procedures. Significant funding from various sources, including notable organizations such as the Volkswagen Stiftung, the Arcadia Fund, and the Documenting Endangered Languages Programme, has resulted in the production of accessible and well-preserved materials of high academic value. Very often these language documentation projects and programs are linked explicitly to aspirations of language revitalization. Austin (2016), a prominent scholar in the field of language documentation, indirectly suggested: "...there are opportunities for language documentation to adopt a more socially-engaged approach to languages to and linguistic research, including better engagement with language revitalisation." The note that there are opportunities for "better engagement with language revitalisation" perhaps implies that so far this has not been one of the primary foci of the language documentation movement.

When modern linguistics emerged in the mid-nineteenth century, its foundation was empirical data. This means that linguistics has always been concerned with collecting language data and describing those data. This *modus operandi* was clarified and refined throughout the nineteenth century (Law, 2003). In the twentieth century the relationship between data collection and data analysis became clearer. As Woodbury (2003) explained: with a traditional view, ...linguists have equated documentation with the traditional products of linguistic description, namely a grammar, a dictionary, and a set of texts (p. 39). The relationship with each other is hierarchic. At the top is the grammar, documenting the broadest generalizations; next is the lexicon, serving as an appendix to the grammar: e.g., Bloomfield (1933) called it a list of basic irregularities. As Samarin (1967) pointed out in this hierarchy (p. 46), the texts and narratives that formed the basis of these analyses were only added in limited amounts, that is just "enough texts to permit a verification of the analysis". So we can summarize that twentieth century documentation, while based on data collection working with indigenous speakers to build a corpus of the language under study, was focused on producing grammars and lexicons, perhaps with some exemplary texts.

Twentieth century documentation of languages produced a large quantity of language materials. However, many scholars would say that this documentation was simply language description, that the focus needs to be on the data collected,

the narratives, and the texts, not on the linguistic analyses (see [Himmelmann, 1998](#)). [Austin \(2017\)](#), however, suggested that the dichotomy between description and documentation is not an absolute one. Nonetheless, twenty-first century documentation is markedly different from twentieth century documentation.

There are several features in this sketch of language documentation that merit highlighting. First, contemporary documentation emphasizes close collaboration with language communities. Second, documentation consists chiefly of making high-quality audio and video recordings. Third, the diversity of the registers and varieties of a language must be reflected by working with a variety of speakers in the language community. One might say that these three features are conceptual principles of language documentation. However, it might be useful to consider the working procedures. Documentation procedures involve: Recording, Transcription, Annotation, Analysis, Translation (Language of wider communication), Archiving; and Distribution.

The intense interest in language documentation that has emerged in this century is not an unforeseen result of technological advances in multimedia and big data corpora. Today's language documentation certainly draws on those technologies and resources but the impetus remains a sociological fact: language obsolescence and language death. The imminent loss of half of the world's languages, precisely those languages that have been overlooked or understudied, is viewed as a depletion or diminishment of empirical resources for linguists. Language documentation efforts serve as a long-lasting linguistic record, providing the foundation for scientific analyses as well as initiatives to revitalize and sustain a community's linguistic heritage. In this sense, language documentation primarily benefits linguists, while also offering valuable support for a language community's revitalization efforts. It appears that language revitalization is often a secondary consideration or an outcome of the language documentation movement.

Certainly, we must agree that collecting, documenting and archiving materials reflecting the intricacies and complexities of obsolescent and moribund languages is an important task. And we are grateful that so many linguists and funding agencies have committed themselves to this critical task. But the procedures of language documentation may not be immediately useful for language revitalization. Language revitalization is different from language documentation. While we definitely support language documentation we must explore language revitalization as a separate enterprise, an enterprise in which revitalization comes first and documentation is a secondary product.

Based on the elaboration above, it can be summarized that language revitalization has great potential to encourage the uses of a minority and lead to the effort of save a language from extinction. For the case of Desa language, according to Herpanus' survey, this minority language has shown the sign of extinction due to the expansion of Indonesia language and other intangible heritage (see §1). For the language documentation efforts, there have many documentation has been carried out to document Desa language, for example, the study by [Chong, Herpanus,](#)

& Remmy (2014), Herpanus (2013), Herpanus, Susanti, & Christina (2018) and even a dictionary, Kamus Bahasa Dayak Desa-Indonesia (Herpanus, 2015). For a minority language which with a population of only approximately 10,000 speakers (Hidayah, 2015), it can be said that the documentation of Desa language has conducted extensively and thoroughly by scholars. However, as noted by Nathan (2017), “You save a language by encouraging its use, you do not save it by just documenting it”, and as language documentation simply archives language materials for the perusal of the linguists of the future, but these archives do not connect actively with the language communities themselves, so in order to encourage the uses of the minority language such as Desa language, projects in with the primary aim to managing language “conservation and development activities” or language revitalization should be carried out. The rationales and activities of carrying out a revitalization project will be explained in § 3 below.

### 3. A Language Revitalization Project

In order to investigate strategies for addressing the intergenerational divergence in language use and choice, a research project titled “Attitudes Towards Language Choice and Ethnicity: Multigenerational Divergence and Rapprochement” (D16-N-0074) was undertaken. This initiative for language revitalization was founded on the belief that the language shift occurring in Indonesia and Malaysia is a reflection of a wider generation gap in cultural, social, and economic practices. The project aimed to examine the variation in language choice among the oldest generation, their offspring, and young individuals under 25 years old in Maluku (Indonesia), Indonesian Borneo (West Kalimantan), and Malaysian Borneo (Sarawak) within select village communities, as illustrated in **Figure 1**. the project aimed to identify strategies to bridge the intergenerational gap. The project outlined four immediate objectives: 1) comprehending the extent of the problem of language obsolescence and extinction; 2) conducting intergenerational discussions and collaborations to identify the challenges; 3) creating relevant products and generating ideas that contribute to language revitalization; and 4) explore the disparities in language loyalty between generations as a component of a broader, unrecognized transformation in other notable cultural and socioeconomic behavioral patterns.

During this two-year initiative, young people were actively engaged in bridging generational gaps by working with the oldest and middle generations. The project took place at three different sites: Sepa (Maluku, Indonesia), Kenyabur (West Kalimantan, Indonesia), and Telian Tengah (Mukah, Sarawak). Throughout the duration of the project, numerous activities were carried out at each site, including:

- 1) Joint meetings of personnel from different generations to discuss the implementation of the project.
- 2) Conducted training sessions for young individuals who will collaborate with community elders in gathering suitable materials in the local language to be disseminated through online media platforms.
- 3) Organizing local language contests, such as story-telling competitions.

- 4) Meeting with village leaders and government officials.
- 5) Conducting a survey among villagers, categorized by age cohorts, to assess language attitudes.
- 6) Distributing t-shirts with logos and slogans in the chosen local languages.
- 7) Producing and disseminating captioned videos via YouTube.
- 8) Arranging public discussions and panels in Malaysia, and delivering public lectures in Indonesian.
- 9) Providing training for teachers of pre-school play groups on the utilization of materials developed by the team, including flashcards and coloring books, with a focus on the usage of local languages.

This endeavor was expected to have significant implications for the revitalization of languages. Despite encountering challenges related to teamwork, all team members from diverse backgrounds demonstrated their support and cooperation in this project. The team members acquired knowledge from one another, and their perspectives on various local cultures were broadened. Furthermore, this project revealed that younger generations exhibited positive sentiments toward their respective national languages, but held ambiguous or mixed attitudes toward their heritage languages. For instance, the storytelling competition organized in both countries revealed that the dominant influence in their speech patterns was their respective national language. Additionally, this program identified contrasting approaches between Malaysia and Indonesia in terms of documenting and preserving minority languages. In Malaysia, the government is full responsibility for this mission, while in Indonesia, in addition to official institutions such as *Badan Bahasa*, privately supported NGOs like *Aliansi Masyarakat Adat Nusantara* (AMAN) actively participate in revitalization initiatives.

This paper will discuss one of the project's revitalization initiatives, specifically the persuasion of instructors of pre-school play groups to incorporate flashcards and coloring books in order to teach local languages. Before proceeding, the following paragraphs will present the conceptual framework of this study, focusing on the utilization of flashcards and coloring books in language instruction and acquisition for pre-school children.

#### 4. The Approaches to Language Development

Language development, as described by Indrayani (2016), is believed to progress in tandem with a child's physical development. It commences with an infant's initial cry and advances as they acquire the ability to communicate via speech. The subsequent section aims to offer a concise examination of the behaviorist and cognitive perspectives on language development in children, specifically during the early stages. These two perspectives play a crucial role in elucidating the learning mechanisms and rationale behind the utilization of flashcards and coloring techniques as effective tools in revitalizing regional languages among preschool-aged children.

The behaviorist theory, also known as the theory of operant conditioning, was developed by psychologist Burrhus Frederic Skinner. This theory focuses on the

use of reinforcements and punishments to influence behavior, including positive, negative, and punitive rewards and punishments. Positive reinforcement involves strengthening a reaction or behavior through rewards, which leads to the repetition of desired behaviors. Conversely, negative reinforcement involves ending an unpleasant condition that follows a response. It is the termination of an unpleasant experience as a result of removing a rewarding experience (Mcleod, 2018). From a behaviorist perspective, in the process of language acquisition, praise from parents for a successful attempt serves as a form of positive reinforcement, while rewards serve as motivation for children to further progress in their learning. Demirezen (1988) provides a concise overview of the “fundamental strategies of language acquisition based on behaviorist theory, which include imitation, reinforcement, and reward.” Although other approaches to language teaching and learning criticize the behaviorist perspective, these three strategies are emphasized as playing a significant role in the use of flashcards and coloring activities for teaching local languages to preschool children.

Chomsky’s nativism theory, which was developed in the 1960s, was one of the approaches that criticized behaviorists in an academic context. While acknowledging the importance of environmental learning in the process of learning and development, Chomsky’s theory argues that the child’s brain possesses an inherent ability for language acquisition called the Language Acquisition Device (LAD). According to Chomsky, the human brain is genetically programmed to acquire a language, specifically the underlying structures of a language system. Nativists do not acknowledge the correlation between LAD and cognitive ability, nor do they take into account environmental factors. The Chomskian approach has influenced numerous scholars to study the concept of innate and biological grammatical categories that facilitate the entire language development of children. However, some psycholinguistic scholars have recently started to question the validity of Universal Grammar. They suggest that, instead of a language-specific mechanism, children may rely on general cognitive and learning principles. For more information, please refer to the work of Lemetyinen (2012).

The primary focus of the cognitivist approach is the study of the manifestations of mental growth and language learning. According to Ertmer & Newby (2013), cognitive theories place emphasis on understanding the conceptualization of students’ learning processes and address the issues relating to how the mind receives, organizes, stores, and retrieves information. Knowledge acquisition is described as a mental activity that involves internal coding and structuring by the learner. The learner is considered to be an active participant in the learning process. This theory emerged in response to the limitations of behaviorism theory. Cognitivists argue that behaviorism, which emphasizes stimulus-response relationships and environmental factors, has neglected the individual’s knowledge structure and other more advanced mental processes, such as problem solving and critical thinking.

The cognitive-oriented theory of language acquisition was pioneered by the Swiss psychologist Jean Piaget (1896-1980). Piaget dedicated years to observing

the intellectual development of his own children in order to gain insights into the cognitive growth of children. Through his research, he concluded that “development is influenced by both genetic and environmental factors. As children actively interact with their surroundings, knowledge is constructed and reconstructed” (Ginn, 1985). **Table 1**, presented below, illustrates Piaget’s significant contributions to our comprehension of various stages of cognitive development (as cited in Muthivhi, 2015):

**Table 1.** The phases of cognitive development (adapted from Muthivhi, 2015).

Major developmental stages	Approximate age ranges	Dominant cognitive activities
Sensory-motor	0 - 18 months	Maturation, sensory and motor coordination.
Preoperational	18 months to 5 years	Self-mastery through ego-centrism, symbolic representation and early language acquisition.
Concrete operation	5 - 11 years	Decentration, self-monitoring, reflection, analysis, and comparison necessary for logical-operational activities applied to concrete situations and concrete objects.
Formal operations	12 years to adulthood	Logical thought processes proceeding from abstract categories and less dependent on concrete objects and situations. Self-monitoring, self-reflection, analytic and comparative activities, and increasing abstraction of thought processes.

According to Piaget’s stages of cognitive development, early language acquisition occurs during the preoperational stage, with language development playing a crucial role during this period. In this stage, children acquire language and its symbolic functions while focusing on self-mastery. The child’s vocabulary expands significantly during subsequent phases, particularly in the early preoperational stage (around 18 months of age), and by the end of this stage, most children are prepared for formal education. The design of the teaching and learning curriculum in preschool programs serves as a solid foundation for effective learning. Piaget’s theory of human development has greatly influenced modern educational practices (Muthivhi, 2015). These aforementioned theories can adequately explain the importance of teaching endangered languages through the use of flashcards and coloring books.

## 5. Flashcards and Colouring Book

The brain exhibits enhanced information processing capabilities when presented with visual stimuli, and children demonstrate improved information retention when exposed to a combination of auditory and visual stimuli. Visual learning entails the utilization of visual mediums such as pictures, flowcharts, diagrams,

videos, simulations, graphs, cartoons, coloring books, slide shows or PowerPoint presentations, posters, movies, games, and flashcards (Raiyn, 2016). From the aforementioned visual instructional techniques, flashcards and coloring books were selected as the language revitalization tools for this particular project.

Gelfgren (2012) highlighted the significance of incorporating visual teaching methods into the classroom. Numerous previous studies have demonstrated that a majority of students learn more effectively through visual stimuli. Flashcards, in particular, are intentionally designed with vibrant illustrations to captivate students' attention and foster a positive commencement of the language learning process. The advantages of utilizing flashcards in language teaching can be succinctly summarized as follows:

- 1) Flashcards can be utilized across various subjects, including language acquisition.
- 2) They are user-friendly and suitable for all levels of instruction.
- 3) Flashcards provide an enjoyable approach to acquiring new vocabulary and understanding grammar.
- 4) They are an excellent tool for presenting and reinforcing vocabulary through drilling and repetition.
- 5) Flashcards facilitate the most expedient learning method and enhance the overall learning process.

A colouring book is a book filled with line art that children colour using crayons or coloured pencils. The use of colouring books is a popular technique in preschool education. As mentioned by Rhattiga (2016), the advantages of using colouring books are manifold, including the enhancement of vocabulary acquisition, the improvement of fine motor skills, the nurturing of creativity, and the tapping into children's interests in design, graphics, or architecture. Furthermore, the images found within a colouring book can even encourage children to count and identify objects depicted in the pictures. The sample of the coloring book depicted in **Figure 2** pertains to freshwater fish. This particular coloring book was produced by the members that involved in the Desa language revitalization project. It was disseminated amongst children participating in the flashcard teaching section.



**Figure 2.** Colouring book of freshwater fish (in the Desa language).

## 6. Flashcards Strategy in Teaching Local Language

Language documentation has traditionally been the predominant approach in contemporary efforts to “preserve” languages. In contrast, language revitalization does not primarily involve the creation of dictionaries, grammars, IPA transcriptions, or analytical essays focusing on deictic and verbal inflection. Rather, the emphasis is placed on developing innovative strategies to revive language usage in communities where there are sufficient native speakers to sustain the ancestral language. In this project, one of our aims is to revitalize language acquisition by incorporating the strategy of utilizing flashcards for teaching the local language within early childhood education programs or *Pendidikan Anak Usia Dini* (PAUD) in Indonesia.

### 6.1. The Background of PAUD in Indonesia

Since 2002, Indonesia has experienced a significant surge in the proliferation of early childhood institutions (or PAUD). In an effort to further bolster this development, the government initiated the “one village, one PAUD” campaign in 2012 (Won & Andriany, 2019). According to the Statistic PAUD 2020/2021 report (Kementerian Pendidikan dan Kebudayaan Sekretariat Jenderal, 2021), West Kalimantan (Indonesia) currently has a total of 2673 PAUD institutions. One of the PAUDs selected for carrying out revitalization activities is the PAUD in Buah Rindang, Sintang (Figure 1). In general, the implementation of early childhood education in Indonesia is organized according to specific age groups. These include: 1) PAUD services for Child Care Park, which cater to children under the age of six, 2) Play Groups, which are designed for children between the ages of two and four, and 3) kindergartens, which are intended for children aged four to six.

Since 2013, the government has revised the PAUD curriculum to emphasize the development of religious and moral values, physical-motor, cognitive, language, social-emotional, and artistic skills. The learning process is facilitated through various sources and learning materials (Husein, 2020). According to Tedjawati et al. (2017), Indonesian, the national language, is a compulsory subject in the PAUD curriculum for children in the preoperational stage. The literacy learning objectives encompass listening, speaking, and understanding basic Indonesian verbally, as well as basic alphabets. The syllabus for this program incorporates elements of the local language. However, the teaching of the local language is often inconsistent and disorganized. For instance, parts of the human body are explained in Indonesian rather than the local language, and family and kinship terms are introduced in both Indonesian and the local language.

As Indonesian has gained the status of a national language, it has become the official language in all formal domains, such as education, media, legislation, literature, and more. In society, it is widely used in the modern environments of major urban areas (Quinn, 2001). Due to the importance of the Indonesian language, early childhood education institutions (PAUD) prefer to teach Indonesian to children rather than local indigenous languages. For example, a study conducted

in Negeri Desa Tigawasa, Bali by [Suartini et al. \(2016\)](#) demonstrated that the use of the flashcard strategy in teaching Indonesian in kindergartens has significantly improved children's oral language abilities. In an article by [Ulfa \(2020\)](#) that focused on the production of flashcards for teaching in PAUD, the author stated that the language mentioned on the flashcards "can be either Indonesian or English". This means that the main purpose of designing the flashcards was to teach the major prominent languages (such as Indonesian and English) in preschool. A similar case was also found in a study by [Kristsuana et al. \(2023\)](#). As children easily get distracted while listening to stories, and in order to improve their receptive skills and make them pay attention to story listening, the researchers used the flashcard strategy as a medium to enhance children's interest in listening to stories and to nurture their receptive skills. Once again, the stories used in their experiment in Surabaya were in Indonesian.

In their study on the efficacy of employing the coloring book strategy to enhance language acquisition in preschool children, [Qadha & Mahdi \(2019\)](#) discovered that the integration of visual imagery as a pedagogical tool significantly facilitates the acquisition of new vocabulary. Their research identified semiotic teaching methods as being effective in facilitating the acquisition of abstract or concrete words in a second language. Given its proven effectiveness, utilizing this approach in teaching local languages could serve as an additional strategy to enhance preschool children's engagement and motivation in the learning process. From a psychological perspective, the study conducted by [Sari & Muhajir \(2021\)](#) in East Java revealed that the visual characteristics of children's paintings undergo various developmental changes in accordance with their age and abilities. Notably, some children demonstrated the ability to incorporate spatial and temporal concepts into their artwork, thus providing an observable manifestation of their psychological development. When discussing the correlation between color and language learning in Indonesia, it can be said that the case is similar to the use of flashcard strategy in PAUD. Scholarly literature on the significance of color in facilitating language acquisition primarily concentrates on the acquisition of Indonesian, rather than other languages, particularly minority languages. For instance, [Abidin's study \(Abidin, 2020\)](#) emphasizes a teaching strategy that links colors to objects of the corresponding color, which ultimately assists in the development of semantic knowledge or schemas among preschool children. It also addresses the challenges of teaching Indonesian to preschool children who are influenced by their native local languages. In this scenario, the children were frequently observed to struggle with using Indonesian in formal settings.

Based on the reviews, it is evident that the flashcard teaching strategy and the use of coloring books in preschool are undeniably effective in enhancing teaching and learning, as well as the psychological development of children. However, despite Indonesian being recognized as the most important language in the country, the majority of teaching pedagogy focuses primarily on teaching Indonesian and neglects the native languages that serve as markers of ethnic identity. In the


following sections, the significance of using flashcards in teaching the local language (Desa) will be presented and discussed.

### 6.2. The Flashcards Teaching Technique and Its Significance

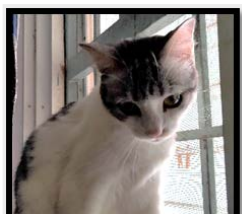
Based on our field observations, it has been determined that an endocentric approach should be employed when teaching local languages. In order to effectively convey the benefits of this approach, direct communication with the communities is necessary. Consequently, the decision was made to promote the use of flashcards for teaching preschool children the local language. The primary focus of our project centers around play groups, specifically the age group (ii). These play groups consist of regularly scheduled sessions where a group of preschool children gather at a designated location for activities such as playing, singing, engaging in practical tasks like drawing, and fostering social interaction. The employment of flashcards in this specific context, for this particular age group, is considered a valuable mnemonic device instrument that can expedite the acquisition of new information. Additionally, this approach is cost-effective and holds the potential to optimize the efficiency of vocabulary acquisition in the target language.

In Sintang, 25 flashcards depicting the fauna found in the surrounding area were produced. These flashcards feature various creatures such as chickens, flies, dogs, cats, mice, and worms, etc. These living beings are commonly encountered in the local environment and hold cultural significance for children. In traditional villages, domesticated animals like dogs, chickens, and ducks are typically allowed to roam freely. Additionally, children often come across other creatures in their daily surroundings, including frogs, lizards, snakes, and insects. As noted by Kidd & Kidd (1990), many children display a natural curiosity and interest in animals from a young age. Therefore, it is appropriate to use living organisms as a fundamental educational tool for preschool-aged children. This is in line with the statement made by Born (2018), which suggests that early childhood environmental education can foster a sense of wonder and curiosity about the natural world. It also aims to cultivate knowledge, appreciation, curiosity, and respect for the environment among young children. Table 2 displays a selection of five flashcards that were produced for the project in Sintang.

Table 2. Examples of flashcards produced.

Example	Pronunciation	Descriptions
	manuok	<ul style="list-style-type: none"> <li>• <i>Gallus gallus domesticus</i>, was believed to have been domesticated in Southeast Asia 8000 years ago (<a href="https://en.wikipedia.org/wiki/Chicken">https://en.wikipedia.org/wiki/Chicken</a>).</li> <li>• The most common domestic animal and is found free-roaming elsewhere in villages.</li> <li>• As the source of meat and eggs.</li> </ul>

## Continued



mayau

- They are also known as domestic cats or free-fed house cats.
- Kept as a companion animal by the villagers.
- Roam free around.



ciceak

- Also known as house lizard.
- They can be seen crawling around on ceilings or walls.
- *Hunt* for inserts at night.



nyamuok

- In village, this tiny insert species with a tube-like mouthparts.
- Presented elsewhere, day and night, or in dim space.
- Bloodsucking and causes itchy rash.



geriga

- It is commonly found in freshwater (lakes or ponds) or underground.
- Cold-blooded, sticky and moist skin.
- Croaking during a rainy day.

### 6.3. Flashcard Teaching Experiment in PAUD, Sintang

To promote the utilization of flashcards in PAUD classes for the purpose of teaching the local language, team members initially visited a PAUD program located approximately 15 KM away from Sintang. The primary objective of this visit was to meet with the instructors and engage in a comprehensive discussion regarding the implementation plan. Following an exchange of ideas and experiences, the instructors expressed their support for the team members' proposed initiative. The experiment involved the participation of 13 children, aged 4 - 5, and 5 instructors, some of whom acted as observers. A video clip capturing one of the PAUD sessions at Buah Rindang has been uploaded to *YouTube*:

[https://youtu.be/KqVOoY7\\_jm8?si=y0\\_sPCvEBM6PQzxh](https://youtu.be/KqVOoY7_jm8?si=y0_sPCvEBM6PQzxh)

The subsequent discussion offers a comprehensive analysis and summary of a segment from this video clip (**Figure 3**).

## 7. Discussions

The flashcard teaching demonstration at PAUD Buah Rindang can be considered as a practical method for language revitalization. Several insightful concepts have been validated and justified, and the effectiveness of this approach has also been observed.

1. The teacher stands in front of the children with flashcards provided by the project team.
2. She begins the section with a brief introduction and instructs the children to respond in “bahasa kitai” (Literally, ‘our language’)—the Desa language.
3. The instructor presents the initial card displaying an image of a rooster and asks for the name of the animal in the Desa language (Duration 0:12). Some of the children respond at the same time with the word “manuok”, while a few of them shout “ayam”, which is the Indonesian word.
4. Since the majority of the children respond correctly, the teacher praises them and proceeds to inquire about the specific physical attributes of a rooster. For example, after [Duration 0:25], she asks: “manuok bisi sayap kah” (Does a rooster have wings?) in the Desa language. The children respond in the Desa language, stating “bisi” (yes, it does). Continuing the inquiry, the teacher asks [Duration 0:27], “brapa uti?” (How many?), to which the children reply, “dua” (two).
5. It is evident that all the children are displaying cheerful and enthusiastic behavior when engaged in this teaching method. Notably, one child demonstrates his interest by imitating the flapping of a rooster’s wings with his arms [Duration 0:31].
6. The instructor proceeds to the subsequent card, featuring an image of an insect known as “kekumang”. The teacher asks the name of the insect depicted in the picture. It is found that a few of the children are unfamiliar with the term “kekumang” [Duration 0:55], Nevertheless, they demonstrate a solid understanding of the insect’s characteristics such as its physical appearance, habitat, and methods of capturing it.
7. The classroom ambiance is characterized by excitement and enjoyment. In Duration 1:41, the teacher revisits the first flashcard and encourages the students to provide further details about the characteristics of the “manuok”. As she inquires about the sound it produces, all the children enthusiastically and noisily begin to imitate a rooster’s crow [Duration 2:15].
8. The third card features an image of a cat. When the teacher asks the name of the animal on the card, some children respond in Indonesian, specifically saying “kucing” instead of “mayau” in the Desa language [Duration 3:34]. The teacher continues using Desa language by asking questions like “Do you have a cat at home?”, “How many legs does a cat have?”, “Does a cat have a nose? Ears? Whiskers?”, and “Whose ears are bigger, the cat’s or yours?”. In Duration 3:59, the teacher attempts to encourage the children to practice counting by asking about the number of legs on a cat.

**Figure 3.** Summary of the teaching session depicted in the video clip.

Firstly, the implementation of flashcards to teach local dialects has proven to be highly appealing to preschool children. Through observations conducted at PAUD Buah Rindang, it was observed that the children responded with great enthusiasm and interest towards this innovative teaching method. Consequently, an atmosphere of excitement and eagerness for learning was fostered, leading to active participation from the children who eagerly answered the teacher’s questions. This particular teaching strategy serves as an exemplification of the concept known as “active learning” within the classroom setting. The notion of “active learning” stresses the importance of instructors going beyond mere listening, as this approach directly influences the learning outcomes of students (Bonwell & Eison, 1991). Although Bonwell and Eison primarily discussed teaching strategies within higher education, the findings of this project’s experiment indicate that “active

learning” holds relevance and can be effectively incorporated at the preschool level.

Secondly, the utilization of flashcards by PAUD instructors to teach the local language, along with innovative pedagogical skills, is an additional strategy that can enhance the adoption of local languages in school communication. This is because interactive teaching methods have the potential to improve the quality of education (Holubová, 2010). In Indonesia, Indonesian is the national language and is widely used in both formal and informal settings, including schools and PAUD sessions. However, the use of Indonesian as the medium of instruction in schools inadvertently contributes to the decline or extinction of many local languages through the education system (Lauder, 2007 in Marnita, 2013). In this experiment, it is required for the teacher to use the Desa variety exclusively throughout the entire lesson. Consequently, it is evident that this teaching session was conducted entirely in the local language, with the exception of Indonesian. This arrangement creates a dedicated space for the utilization of the indigenous language, which serves as an initiative to enhance children’s confidence and communication skills in the local language, as well as the sustainability of the language. Furthermore, this strategy enables the instructor to assess each student’s proficiency level in the local language and subsequently develop an appropriate pedagogical approach for future local language teaching.

Third, as mentioned by Paniagua & Istance (2018), novel pedagogies are a challenging subject. Despite the fact that innovation has become a common priority in educational systems, schools are still widely regarded as resistant to change, with exceptions reserved for highly motivated or skilled teachers. This project has highlighted the significance of innovative pedagogy and the necessity of viewing it as a core component of the teaching profession. The instructor who participated in the above-mentioned flashcard teaching session demonstrated creativity in her approach to teaching kids the local language. The teacher was witnessed using her creativity to present the lesson material in flashcards without the use of recitation or memorization techniques. For instance, the kids weren’t asked the animal’s name one by one on each card. Instead, the instructor made an effort to broaden the discussion by asking more pertinent questions. Without a doubt, this strategy encouraged the kids develop their foundational critical thinking abilities. For example, in answering comparative questions such as “Whose ears are bigger, the cat’s or yours?” and “How do you catch an insect?” the children provide a variety of responses based on differences in their “stored” information and cognitive abilities. Furthermore, this strategy can promote elaborative language encoding during the language learning process. Anderson (2010) defines elaborative processing as “creating additional information that relates and expands on what needs to be remembered.”

Based on the video footage, it seems that the students were enthusiastic and eager to learn these new words after being introduced to the insect’s name by their instructor. The inclusion of the cognitive process of encoding in the two-store

(dual) memory model can be observed in this context, as it relates to the use of flashcard teaching methods. According to Schunk (2012), encoding refers to the process of inputting new information into the information processing system and preparing it for storage in Long Term Memory (LTM). Encoding is typically achieved by making new information meaningful and integrating it with existing knowledge in LTM. Among the three factors that influence encoding—“organization,” “elaboration,” and “schema structure”—“elaboration” is relevant to the local language teaching in the PAUD session. Schunk describes “elaboration” as the process of expanding upon new information by adding to it or connecting it with what one already knows. Elaborations support encoding and retrieval by linking the information to be remembered with other knowledge. In essence, the flashcard teaching strategy can assist in retrieving vocabulary that children have difficulty recalling or are unfamiliar with.

Fifth, the flashcard teaching strategy is an inherently straightforward instructional technique. It involves the initial step of arranging the cards, followed by the instructor standing in front of the students and presenting the cards in a visible manner. Lastly, the instructor asks the desired questions to the students. Notably, the experiment conducted within the PAUD setting reveals a noteworthy correlation with two prominent developmental theories in the field of language learning and teaching—behaviourism and cognitivism.

Learning is defined in behavioral psychology as the association of the “stimulus-response” principle. The behaviorist approach emphasizes the role of environmental stimuli in shaping an individual’s behavior. Behaviors can be identified and modified through the use of rewards and punishments. Rewards reinforce desired behaviors, while punishments discourage their repetition. As Watson (in Burhanuddin et al., 2021) stated, “positive behavior involves the application of a stimulus, while negative behavior involves the withholding of a stimulus.” During the flashcard instruction session, the pictures on the cards served as the stimuli. This novelty in teaching technique captured the children’s interest, as it was the first time the PAUD instructor used this approach in class. The instructor’s praise, such as saying “bagus” (good), when the children provided correct or creative answers, acted as a form of reward for them. From the beginning to the end of the video clip, we can observe the children studying with enthusiasm and excitement. When the children were uncertain about an answer, the teacher’s willingness to provide cues or hints to help them recall the information could be seen as a form of praise for the children. After receiving the teacher’s accurate response, the students seemed elated.

According to Piaget’s theory of human development, children reach the stage of concrete operational development during their preschool years. At this stage, they are able to engage in reflective processes, analysis, and comparison, which are necessary for logical-operational activities. Thus, the use of concrete objects in educational practice helps the child to master the complex demands of tasks (Muthivhi, 2015). Consistent with Muthivhi’s assertion, incorporating flashcards

into the classroom environment can indeed promote abstract thinking in children. For instance, questions such as “Whose ear is bigger?”, “How do we capture an insect?”, “Is the cat’s mustache long or short?”, and “How do we treat a cat, by hitting or petting it?” are all subjective queries that require children to explain concepts related to concrete objects.

## 8. Conclusion

In conclusion, the promotion of the flashcard teaching method in PAUD sessions is an effective approach to encourage children to learn and utilize their native language. Despite the simplicity and affordability of flashcard design, the impact of this method holds significant value in the field of learning and teaching, especially in early childhood education. From a cognitivist perspective, the utilization of flashcards may enhance children’s knowledge, such as language vocabulary, through the encoding process. The use of flashcards has proven to facilitate the transition of children’s thinking from concrete to abstract. Additionally, the behaviorist approach, which emphasizes the effectiveness of learning through patterns of reinforcement and punishment, complements the flashcard teaching strategy. The teaching abilities of instructors play a crucial role in the success of local language teaching programs. This study reveals that teaching local languages to preschool children does not necessitate complex procedures or modern media technologies, but rather relies on fundamental flashcards and innovative teaching skills.

As previously highlighted, the documentation of endangered languages is undeniably a paramount concern. The significance of language documentation for contemporary linguists cannot be disputed. However, as emphasized in this concise paper, language revitalization presents itself as a distinct task separate from documentation. For revitalization to be successful, it necessitates the commitment of the community and the empowerment of individuals. Diligent efforts and strategic attempts must be made to ensure that the language community wholeheartedly dedicates itself to preserving their heritage language by actively utilizing it in everyday life and integrating it as a valued component. The research presented in this paper elaborates on the innovative concept of employing flashcards and coloring books as educational tools for teaching local languages at the preschool level. The enthusiastic response from the children serves as a testament to the efficacy of this pedagogical approach. What are the subsequent steps? Perhaps these strategies can be further refined and expanded to other early childhood education settings, and subsequently evaluated for their effectiveness. Furthermore, it is essential to identify funding sources that consider language revitalization as a fundamental component of community development. Above all, as linguists and academics, we must acknowledge that the revitalization of languages significantly differs from their mere documentation.

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## Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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